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Supplements

Dental Student Attrition

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Dental Student Attrition

I. INTRODUCTION

Annually, the Division of Educational Measurements gathers student attrition data from United States dental schools* by means of the **Survey of Predoctoral Dental Educational Institutions** as well as through withdrawal forms submitted for each of the students who withdraw from school. Students who repeat an academic year or who receive a definite leave of absence are not included in these data. Between 1973 and 1979, the attrition rate after one full year of dental education was approximately 3.56% (see Table 1). However, during the past five years the rate of attrition for the dental school freshmen has begun to climb, 4.30% in 1980-81, 4.95% in 1981-82, 5.57% in 1982-83, 6.77% in 1983-84, 7.23% in 1984-85, and 8.24% in 1985-86. During 1985-86, 200 sophomores (4.28% of the sophomore class) withdrew, while 84 withdrew from the junior class (1.78%) and 37 from the final year of dental education (0.73%). These 720 students amount to 3.73% of the total 1985-86 dental school enrollment.

TABLE 1

DENTAL SCHOOL FRESHMAN ATTRITION,
1973-74 to 1985-86

ACADEMIC YEAR	FIRST-YEAR ENROLLMENT	TOTAL FIRST-YEAR WITHDRAWALS	
		Number	Percent
1973-74	5,455	193	3.54
1974-75	5,617	209	3.72
1975-76	5,763	200	3.47
1976-77	5,935	214	3.65
1977-78	5,954	200	3.36
1978-79	6,301	230	3.65
1979-80	6,132	216	3.52
1980-81	6,030	259	4.30
1981-82	5,855	290	4.95
1982-83	5,498	306	5.57
1983-84	5,274	357	6.77
1984-85	4,937*	357*	7.23
1985-86	4,843*	399*	8.24

* First-Year enrollment and attrition for Emory University is not included.

Comparing the number of 1985-86 withdrawals with the number of students in their individual freshman classes permits a conclusion that an attrition rate of approximately 14.6% can be expected of a class of students for the four years of dental education. This four-year rate of attrition has increased from the 13% that would have been expected based on 1984-85 data.

First-year attrition occurred in private and private, state related schools with approximately the same frequency as in public schools. Private school first-year attrition accounted for 45% of 1985-86 freshman withdrawals. Private schools accounted for 47% of first-year enrollment during that same year. The majority of freshmen who withdrew did so voluntarily (61%). Less than one-half (45%) of all freshman withdrawals were in good academic standing when they withdrew.

* Emory University is discontinuing its predoctoral dental education program and is no longer accepting entering classes. Enrollment and attrition data for this program is not included in this study.

II. PERSONAL REASONS FOR ATTRITION

Personal reasons for withdrawal in general, have, in previous years, outnumbered academic reasons (Table 2), while a change of career objective was the most frequently reported personal reason for withdrawal from dental school (Table 3). This trend has continued in 1985-86. Most of the students who withdrew for personal reasons were in good academic standing and had no reported difficulty with coursework, but they withdrew to follow a career other than dentistry. During the 1985-86 year, 9 students left dental school explicitly to enter a medical school and 64 student left a particular dental school to transfer to another dental school. Twenty-six of these 64 students were freshmen. Financial reasons were given for the withdrawal of 19 students, ten freshmen, seven sophomores, and two juniors.

TABLE 2

GENERAL REASONS FOR FRESHMAN ATTRITION, 1980-81 to 1985-86

GENERAL REASONS	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
Withdrawals for Personal Reasons	65.3%	59.0%	53.9%	57.9%	46.8%	52.8%
Withdrawals for Academic Reasons	34.7%	41.0%	46.1%	42.1%	53.2%	47.2%
Problems in Didactic Courses Only	18.5%	24.5%	25.4%	21.7%	33.3%	28.3%
Problems in Technic Courses Only	7.3%	4.5%	3.0%	4.2%	4.2%	3.8%
Problems in Didactic & Technic	8.9%	12.1%	17.7%	16.2%	15.6%	15.0%

TABLE 3

GENERAL REASONS* FOR ATTRITION, 1985-86

GENERAL REASONS	FRESHMEN	SOPHOMORE	JUNIOR	SENIOR	TOTAL
Withdrawals for Personal Reasons					
Change of Career Objective	64	33	6	8	111
Other General Reasons	38	21	16	2	77
Transfer to Other Dental School	26	35	3	0	64
Financial Problems	10	7	2	0	19
Family Problems	15	4	6	1	26
Poor Health	9	8	1	0	18
Lack of Interest	1	3	0	0	4
Enter Medical School	2	5	1	0	8
Emotional Problems	4	1	3	0	8
Disciplinary Suspension	1	0	2	0	3
Indefinite Leave of Absence	41	14	10	7	72
Withdrawals for Academic Reasons					
Problems in Didatic Courses Only	72	17	3	0	92
Problems in Technic Courses Only	15	12	2	0	29
Problems in Didatic and Technic	60	26	5	1	92
Problems in Clinic	0	1	14	11	26
Indefinite Leave of Absence	41	13	10	7	71

* Reasons for withdrawal are sometimes not specified.

III. ACADEMIC REASONS FOR ATTRITION

In annual studies of dental freshman attrition, a comparison between the DAT scores of students withdrawing because of academic problems and the DAT scores of all freshman has been completed. Since 1975, when this analysis was initiated, the studies have indicated that the percentage of these students with below average DAT scores was significantly greater than the percentage of all freshmen with below average DAT scores. This year, again, there is a significant difference in the DAT scores of those who withdrew because of scholastic difficulty and the remaining freshmen. The mean DAT academic average of those withdrawing for personal reasons was 4.37 (somewhat lower than the mean for all freshmen, 4.41), while those withdrawing because of problems in academics have a significantly lower mean DAT academic average, 3.28. This difference is in evidence in the technic area also. The mean perceptual ability test scores for those withdrawing for personal reasons was 3.93, for those withdrawing because of problems in technic courses, 4.28; all freshmen, 4.54. Figures, 1, 2 and 3 graphically portray these differences. Freshman who withdraw because of problems in academic or technic coursework continue to have, on the average, significantly lower DAT scores than other first-year students.

IV. MINORITY ATTRITION

In 1985, women constituted 27.3% of the entering class in all United States dental schcols and 25.3% of the entire dental enrollment. Women, however, made up 30.8% of the first year withdrawals and 28.1% of the withdrawals from all four years. As can be seen from Table 4, the attrition rate for women in dental school was slightly higher than for men in 1985-86.

TABLE 4

SEX DIFFERENCES: TOTAL ENROLLMENT ATTRITION BY SEX, 1985-86

SEX	Freshman		Sophomore		Junior		Senior		TOTAL	
	N	%*	N	%*	N	%*	N	%*	N	%*
Male	276	7.84	151	4.46	62	1.74	29	0.73	518	3.58
Female	123	9.29	49	3.82	22	1.90	8	0.71	202	4.12
Total Attrition	399		200		84		37		720	

* For males, percent of male enrollment; for females, percent of female enrollment.

An analysis of student attrition by ethnic minority categories indicates that Black students withdraw at a greater rate than other students. As Table 5 indicates, Black students account for a disproportionately large percentage of withdrawals as compared to their percentage of enrollment. A similar trend may be seen for Asian students.

FIGURE 1

DAT SCIENCE COMPOSITE SCORES vs. FRESHMAN ATTRITION, 1985-86

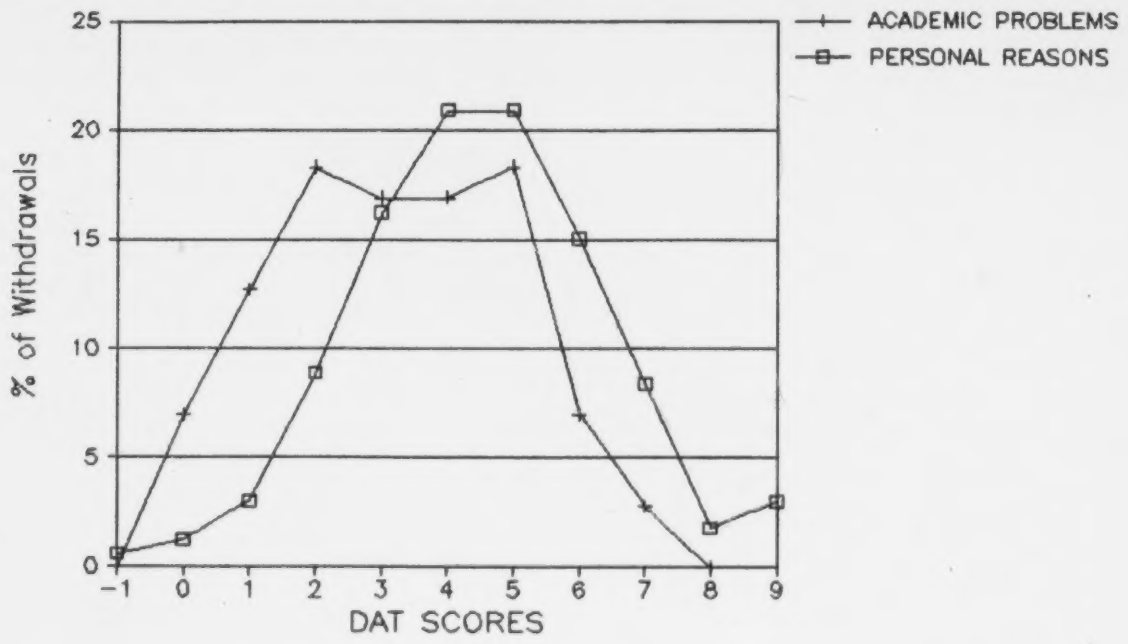

FIGURE 2

DAT ACADEMIC AVERAGES vs. FRESHMAN ATTRITION, 1985-86

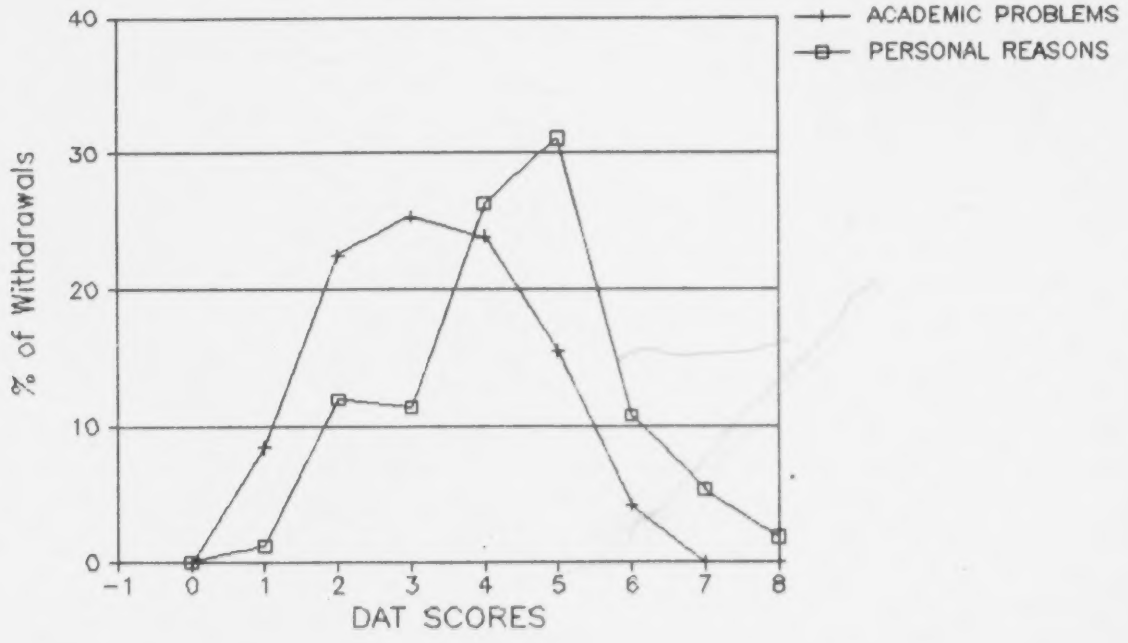

FIGURE 3

DAT PERCEPTUAL ABILITY SCORES vs. FRESHMAN ATTRITION, 1985–86

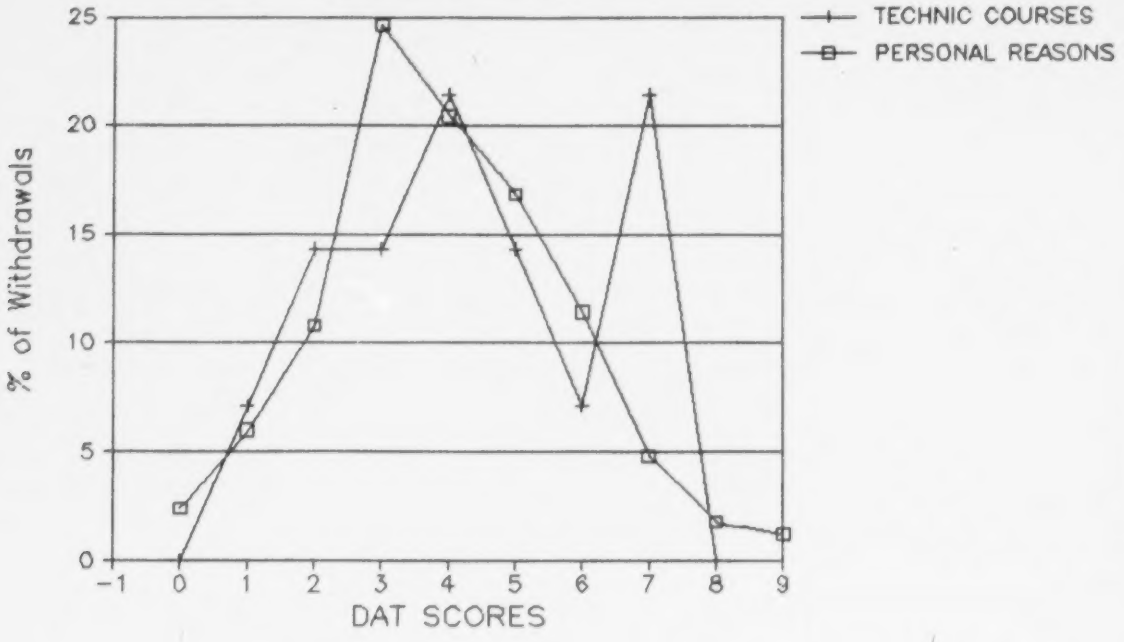

TABLE 5

FRESHMAN RACE/ETHNIC DIFFERENCES:
ATTRITION BY RACE/ETHNICITY, 1985-86

Race	Number	Percent of Withdrawals	Total 1st Year Enrollment	Percent of Enrolled
American Indian	1	0.25	16	0.33
Asian or Pacific Islander	53	13.28	496	10.24
Black	46	11.53	281	5.80
Hispanic	21	5.27	312	6.45
White	270	67.67	3,738	77.18
Unknown	8	2.00		
Total	399			

Table 6 indicates that the greatest proportion of the 1985-86 freshman withdrawals of minority students were for scholastic reasons related to coursework. This is not the case for withdrawals of non-minority dental students.

TABLE 6

FRESHMAN RACE/ETHNIC DIFFERENCES:
GENERAL REASONS FOR ATTRITION BY RACE/ETHNICITY, 1985-86

Race	Total Number Withdrawn	Personal	Scholastic
American Indian	1	0%	100%
Asian or Pacific Islander	53	47%	53%
Black	46	37%	63%
Hispanic	21	34%	67%
White	270	58%	42%

V. CONCLUSION

In summary, the freshman attrition rate that had been consistently held to approximately three and one half percent during the 1970's increased to over eight percent in 1985-86. The national dental school entering class can be expected to experience approximately a 14.6 attrition rate by the time of graduation, if one takes the 1985-86 rate of attrition as a base. Like previous years, the students withdrawing for personal reasons outnumbered those withdrawing for academic reasons. Freshman withdrew from school more often because of academic problems in didactic courses than in technic courses, both areas of difficulty having a significant relationship to Dental Admission Test scores. Finally, the attrition rate for women was slightly higher than for men and was also higher for Black first-year students than for other freshmen, as compared to their percentage of enrollment.

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